ORIGINAL RESEARCH ARTICLE: CLINICAL STUDY

AYURVEDIC VIEW OF MODE OF EFFECT OF ELECTROMAGNETIC RADIATIONS ON BODY AND BRAIN AND REMEDY TO PROTECT THEM

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ABSTRACT

Background: Diagnosis by feeling the rhythm of the pulse is the basic and ancient tool of Ayurveda. Rhythm in the pulse is created by the pressure exerted by the blood flowing in the body, which again is controlled by the physiological and psychological actions of the body of every person. Continuous exposure to electromagnetic pollution intervene our Aura and consequently our internal systems, affecting our body like a slow poison. Rhythm of the Pulse can be felt the same way the changes are monitored by performing ECG (Electro Cardiography) of the heart and EEG (Electro Encephalography) of the brain. Methods and materials: The patients were examined by the pulse analysis and physical examination. Blood tests and scanning of patients were done who were having pathological problems. Every record of change in pulse and in body was maintained and from all the records we have come to the conclusion that we are writing in detail. Aims and objectives: To rule out the similar changes in the rhythm of the pulse of almost every person who is exposed to radiations and come out with a solution to protect body. Conclusion: From all the studies we get to know that the radiations increase Fire and Air element in body causing hyperactivity and hyperacidity in body. So we need to keep our self balanced, so that we can keep ourselves healthy as it is impossible to avoid these radiations in day to day life and PIOUS OIL protects one person on multi dimensional level, by creating a healthy Aura around us and by keeping every element water, fire, and earth balanced with the properties of its oils. Key words: Electromagnetic radiations, Electromagnetic pollution, Vata dosha (combination of air and space element) and Pitta Dosha (fire element), Kapha Dosha (water and earth element) and Pulse diagnosis

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I. INTRODUCTION

Now a day, the whole universe and environment are polluted with electrical pollution along with other pollutions. Electrical and Electromagnetic Pollutions [1] is due to frequencies of waves which are oscillating slower than visible light waves and we are surrounded by them 24x7. Tiny electrical currents exist in the human body due to the chemical reactions that occur as part of the normal bodily functions e.g. palpitation of heart, breathing and working of neurons, which create electrical currents in the body and brain. These currents are monitored by ECG (Electro Cardio Graphy) of heart and EEG (Electro Encephalo Graphy) of the brain. The energy carried by electromagnetic radiation is absorbed in to the living tissues and that is converted into kinetic energy of the particles, thus creating heat at the site.

This energy absorbed by the tissues of the living body causes an increase in its temperature that is the aggravating factor for Pitta (Fire Element) in body, and oscillations induce little electric currents in body that is Vata aggravation (Air and Space Element), by interfering with electrical currents which exist in our body due to normal physiological functioning of body.

**Electromagnetic Pollution:**

Exposure to electromagnetic fields is not a new phenomenon, but EMF toxins were not much prevalent as they are now. The slow poison of radiations is extremely prevalent today in low doses due to computers, cell phones and all electrical devices [2].

Fig. 1: Showing Sources of electromagnetic frequencies

Natural sun rays, cosmic radiations and artificial sources like computers, cell phones, power lines and electromagnetic devices emit ionizing radiations and non-ionizing radiations.

During 20th century, environmental exposure to man-made electromagnetic fields has been steadily increasing as a result of the growing electricity demand and advancing technologies. The persons who do not use these gadgets are also under the influence of radiations as these are present all around us. Many studies have revealed a link between the use of these types of technological devices and various forms of illness, including tumors and infertility.

With continuous exposure to these radiations our aura [3] gets influenced by them; radiations start penetrating into the living tissues and interfering with tiny electrical
currents which already exist in the human body due to chemical reactions that occur as part of the normal bodily functions of heart and brain.

We have treated many patients in last few years with different problems and basic reason turned out to be exposure to radiations. So from study on the patients and a particular change in body pulse, we created the data to explain the mode of action of these radiations on physiological functioning of the body.

**Electro Magnetic Radiations Affecting the Environment and Eventually Human Body:**

Electromagnetic frequencies and Electromagnetic Radiations emit heat waves (FIRE ELEMENT OR AGNI TATVA) working as aggravating factor for PITTA DOSHA in environment and consequently human bodies, and oscillations or movements of electric currents and radiations emitted aggravate VATA DOSHA (AIR AND SKY ELEMENT/ VAYU AND AKASH TATVA) responsible for movements in the body and aggravation causes Hyperactivity and dryness in body.

This aggravation disrupts the elemental balance of the environment by interfering with the dampness (water element of nature (JAL TATVA/ WATER & EARTH) subsiding KAPHA DOSHA of environment, as the moisture of the environment is absorbed by these radiations.

The KAPHA DOSHA which is responsible for bonding in relations as well as lubrication and protection of internal organs of the body gets depleted in the environment and environment absorbs water from bodies and other sources of water creating dryness in the bodies and in the environment. The fire and air element thus disturbs space element of our environment. That is why so much emphasis is given on drinking liquids and water now a days.

Now a day, we see people are being self centered and always busy in texting and reading, even in the parties everyone is busy with their gadget, reason being speaking a word needs involvement of saliva that is BodhaK and kledak kapha. As environment is already lacking dampness and our body also want to retain its moisture so a person do not want to speak and it is becoming a reason for lack of bonding in the relations.

EARTH ELEMENT also gets disturbed by earthing of electricity wires. The frequency of earth and physico- chemical properties like pH, moisture, organic matter, phosphate also get disturbed. The frequency of the earth is disturbed to the extent that earth has to drain energy from the human beings and surroundings, which is the main reason for increased cancer, miscarriages, infertility and other metabolic and auto- immune disorders.

**Pulse in Ayurveda:**

Vata, Pitta, Kapha are three basic Energies (Three Pillers) of Ayurveda. They are responsible for every action in our body [4]. From pulse, we get to know about physical and
mental status of the person. Thoughts, mindset and physiological actions of the body of every person emit a different type of electric current in the body which affects flow of blood. Blood flows in a particular rhythm creating vibrations in the arteries and veins, which is felt by keeping three fingers on the prominent or superficial artery in body, mainly radial artery.

**Fig. 2: Showing Three Doshas of Human Body related to five elements of universe**

Pulse gets affected by every little change in our behavior or in the temperament. Body also get affected with the aura of the place we are living in and aura and energy of people surrounding us, as these things directly affect our thoughts and the reflexes of the brain.

Movements of Doshas (Tridosha): Vata, Pita, Kapha in body get affected by every change aggravating one dosha or subsiding the other in the body and the treatment is done accordingly, as balancing three dosha (Vitiations) is main process of treatment in Ayurveda.

II. MATERIALS AND METHODS

The patients were examined by the pulse analysis and physical examination. Blood tests and scanning of patients were done who were having pathological problems. Every record of change in pulse and in body was maintained and from all the records we have come to the conclusion that we are writing in detail.

As so much data cannot be presented in a paper, we will submit it in other paper and if needed we can forward every detail of patients.

**Effect of EM Radiations on Body and Subsequently Pulse [5]:**

In examination, we have noticed a particular change in the pattern of Rhythm of the pulse, not in any particular part of India, but people of almost every country of universe, we have visited in all these years. As, this change is also universal, every patient having any problem is more or less affected with these radiations; although the intensity of changes varies depending upon many factors like:

- Physical and mental Nature (prakriti) of a person
- His resistance (immunity) against diseases
- How much time that person uses the gadgets and type of gadgets he is using
- Field of exposure to radiations and Type of radiations the person is exposed
- People working in sectors where they are directly/ indirectly under exposure
• Means of exposure, like tele-callers under noise pollutions, their brain show a different type of change, People on computers showing different type of changes. Their eyes getting more affected.

• Organs affected or exposed show different type of changes.

All the sense organs (karmendriyas) are the sites which get affected with radiations [6]:

- Nose (nasa)
- Eyes (netra)
- Ears (karna)
- Mouth (jihvaa)
- Pores of the skin (loma)
- Hands

The EMR being a vibrational toxin affects the channels for life energy.

Fig. 3: Showing magnetic & electric field oscillations

EMF toxins create a direct and immediate effect because they are vibrations and can therefore directly interfere with the vibrational channels.

Eyes are the main part being involved and affected as we see every gadget with eyes, the rays enter through eyes and affect the third eye chakra directly affecting the pineal gland and the limbic system of the brain thus hindering with every action of the brain.

Brain being the headmaster and controlling every activity of the body, consequently every organ of the body gets affected. The organs and systems related to specific part of the brain are affected by EMFs and EMR. The human brain has its own electric field due to the functioning of neurons, it is the site which gets affected directly by the interference of radiations and interaction causes damage to cells and molecules [7]. Low or high frequency electric fields influence the human body just as they influence any other material made up of charged particles. When electric fields act on conductive materials, they influence the distribution of electric charges at their surface. They cause current to flow through the body to the ground. Over activation of brain creates more wear tear of the brain and its related soft organs and eventually body (the parts of body being governed by different parts of brain, hormones which regulate the body being secreted by brain) [8].
Fig. 4: Showing energy & wavelength of various light

The fire related to the brain (medhya agni) and the eyes (alochaka pitta) gets aggravated as the nature of radiations is paittika and vatic, causing injury or burning of tissues (kapha dosha subsided) most of them being soft (shrinking due to vata).

Lack of exercise and physical moments of the body also leads to poor metabolism of the body, disturbing dosha in body.

Our body is made up of 70 % water and 30 % solid matter. Water gets affected with every little change or vibrations, so our body gets disturbed by every little change in its surroundings.

In aggregation, these all factors contribute to DOSHA DUSHTI (AGGRAVATION OF DOSHAS) that is Vata (that are vibrations of radiations) and Pitta (heat generated by radiations), which in turn disturb the imbalances in the physiology of entire cellular network. The disturbed vibrations mainly affect the brain affecting the Prana vata and Sadhak pitta.

Vata and Pitta can dry and shrink kapha which is responsible for the bonding in every part of our body. It is the mucosal membrane which protects the whole alimentary canal, pleural lining of lungs, pericardium of heart, meninges of brain and myelin sheath of basic structure of our body that is neuron. We can say GOD has protected every soft organ with a layer of mucosa, which represents KAPHA DOSHA in body. Both Vata and Pitta when aggravated damage this shielding of organs, which is also the case here.

Vatta Dosha [9] (Air and Ether Element):

Life (Prana) flows into the physical body through the air we breathe which carries oxygen (also called PRAN VAYU), the water we drink and the nutrition in food we ingest.

PRAN VATA is located in the brain, head, throat, heart and respiratory organs. When the Vata is disturbed in these organs, all the functions of these organs related to this Vata get disturbed like inhalation, perception of things through senses and taking care of mind.

BODHAKA KAPHA help us in perception of taste, lubricating and moistening of food as it is located in the tongue, mouth and throat. Subsiding of kapha slows down the process of swallowing.

KLEDAKA KAPHA helps in moistening and liquefying of the food in the initial stages of digestion at the upper part of the stomach.
SAMANA VATA takes care of peristaltic movement of the digestive system being located in the stomach and small intestines. Disturbance of SAMANA VATA disturbs proper digestion. Disturbed PITTA (FIRE ELEMENT) disturbs metabolism. With disturbed PACHAKA PITTA (Hyperacidity)(Same place of pran vayu) digestion of food gets disturbed, that is the food being broken down into nutrients and waste. ALOCHAKA PITTA (Eye) gets vitiated creating eye problems. Disturbed SADHAKA PITTA (Hypertension) being located in heart causes disturbed emotions such as contentment, memory, intelligence and thoughts.

Due to RANJAK PITTA formation of red blood cells and further tissues is disturbed as it is located in the liver, gallbladder and spleen. Pitta (agni) nature of the vibrations disturb the digestive in various areas of the body including: cellular system, stomach (jatharagni), liver (bhumtagni), metabolism (dhatvagnis), chest area (sadhaka agni), skin (bharjaka agni). Normally the energy derived from the rasa (nutrients from food) is transformed into ojus and flows in body nourishing the sense organs and their openings.

PITTA: gradually involves all dhatu 7 elements of body i.e. RASA (lymph), RAKTA (blood), MAANS (fat), MEDA (muscle), ASTHI (bone), MAJJA (bone marrow), SHUKER (sperm/ovum) and eventually OJUS that is immunity of body [10]. Over activated Pitta (TEJAS) is unable to produce ojus (vigor or “fluid of life”) as RASA gets over exhausted due to heat. The impurities in ojus leads to manifestation of the problem in the area which is most affected (Sthan Sanshreya).

APANA VATA being vitiated disturbs all downward impulses like urination, menstruation, sexual discharges and elimination of waste products, the navel and the anus are the areas of functioning of APANA VATA. It causes diminished sexual desires reason for increase in infertility issues and constipation that leads to accumulation of AAM DOSHA (WASTE PRODUCTS).

The Waste material which remain in intestine; start fermenting there and causing the formation of gas (methane in some cases which is one of the leading factors of cancer in colon) [11].

As upward movement is the character of gas or air, so it starts pressurizing diaphragm and other vital organs resting on it, causing other physical ailments along with physiological changes in body like Coughing, Breathlessness, Hypertension and pain in the body and joints. Due to stiffness in the body as Slesha Ka Kapha also gets subsided along with aggravation of vata which is for lubrication of all joints.
Avalambhaka Kapha lubricates the heart and lungs and provides strength to the back, chest and heart.

Central Nervous System gets affected due to increased Vata [12]. Brain lacks proper nutrition needed and oxygen levels and thus inhibiting its functions of the release of healthy hormones and hindering other actions associated with the Nervous System.

As neurons are the basic units getting affected with all the vibrations, Vata or Dryness keeps on increasing, causing drying and shrinking of muscles. Tarpaka Kapha is responsible for nourishment of sense and motor organs being located in the head, sinuses and cerebrospinal fluid. The persons who are affected with all these problems or are in constant exposure of radiations lacks calmness, happiness and stability; they become hyperactive and are always in hurry and anxiety, which keep on increasing day by days as all the soft tissues and muscles of the brain start shrinking (being age related phenomenon but prepones due to lack of Tarpak Kapha) [13].

Neurons are the primary source of transferring information from one cell to another, so the synapses (synaptic clefts) are the loci where all transformational activity in the physiology takes place [14].

![Fig.5 showing image of Neuron & Synaptic plate](image)

EMF/EMR vibrations enter these transformational gaps, creating the disturbance in the flow of current or passing of information from one neuron to another; then leading to the adjoining spinal cord (Susuhmna nadi) through which these corrupt energies enter the full physical body. Through the spinal cord Prana is delivered to all the body’s organs and systems. If neurons get affected the functioning of whole body gets affected. Further, with loss of ojus in body NEURONS GET DAMAGED (myelin sheath got cracked and problems occur at synaptic plate) and the electrical impulses get disturbed causing neuropathy ailments [15]. Due to subsiding of Kapha Dosha in body there is shrinkage or atrophy of muscular tissues, blood vessels and the nerves. If the precautions not taken care at this stage, there will be worsening of all the systems [16, 17].

There are mainly 80 diseases due to Vata, 40 types of diseases due to Pitta and only 20 diseases are due to Kapha Doshas. As the
radiations aggravate both Vata and Pitta in the body, so we can very well imagine the consequences [18].

**Prognosis of Affects of Electro-Magnetic Radiations:**

In Ayurveda steps of samprapti can be summarized in the following steps:

- **Reasons (Nidanas)**
  - **1. Characteristics of electromagnetic radiations**
    - a. Oscillations /vibrations
    - b. Heat generation
  - **2. Foods and everything adulterated**
    - (mithya ahaar)
  - **3. Routine upset (mithya vihar)**

Disturbed metabolism

(Dosha dushti)

(Aggravation of doshas)

- Air element
  - (Vatta dosha)
  - (Pran Vayu & Saman Vayu vitiated)
  - Fire element

(Pitta Dosha)

(Pachak pitta, alochak pitta & sadhak pitta vitated)

(Increased vata > increased vibrations > Hyperactivity of cells)

(Increased pitta > increased heat in body > hypertension/ hyperacidity)

Vata cause dryness &

Pitta causes burning in body

Disturbed assimilation of food

Burning of nutritional substances

diminution of kapha dosha

Pitta: gradually involves all dhatus [19]

(7 elements: Rasa (LYMPH), Rakta (BLOOD), Maans (FAT), Meda (TRY, asthi (BONE), Majja (BONE MARROW), Shuker/ Artav (SPERM/ OVUM) &

Ultimately lack of immunity (OJUS)

Further increase

Hyperactivity of cells

Increased wear and tear of cells

(Loosening of body tissues leads to Obstruction in channels)

(Dhatu shaithlya causes Sroto Avrodh)

More aggravation

Increased dryness in body >

Disturbed metabolism >

Fermentation in intestines >
Pressure on diaphragm >
Pressure on vital organs >
Decreased blood and oxygen supply
To vital organs of body and brain)

Leads to various types of Neurological disorders
(As brain lacks proper nutrition and oxygen)
Inhibits its functions of releasing healthy hormones & Actions of the nervous system

Due to subsiding of kapha dosha
Shrinkage of muscular tissues and blood vessels and nerves
Neurons get damaged
(Myelin sheath got cracked and problems occur at synaptic plate)
So the electrical impulses get disturbed
Causing neuropathy ailments

NIDHANA PARIVARJANAM

Symptoms not taken care of and no precautions are taken
Chronic ailments take place

Neuropathy disorders
Auto immune disorders

We should start taking care as soon as we become aware of the consequences of these radiations as these are the irreversible changes

III. CONCLUSION
Everyone is surrounded by electrical and electromagnetic pollution now a day. It is caused due to frequencies which are oscillating slower than visible light waves and we are surrounded by them 24x7. Tiny electrical currents exist in the human body due to the chemical reactions that occur as part of the normal bodily functions e.g. palpitation of heart, breathing and working of neurons, which create electrical currents in the body and brain.
The energy carried by electromagnetic radiation is absorbed in to the living tissues and that is converted into kinetic energy of the particles. This is the full elaborated study, how this energy get absorbed by the tissues of the living body and causes an increase in its temperature that is the aggravating factor for Pitta (FIRE ELEMENT) in body, and oscillations induce little electric currents in body that is Vata aggravation (AIR AND SPACE ELEMENT), interfering with electrical currents which exist in our body due to normal physiological functioning of body and consequently lead to various pathological conditions in the body [20].
From all the studies we get to know that the radiations increase Fire and Air element in body causing hyperactivity and hyperacidity in body. So we need to keep our self balanced, so that
we can keep ourselves healthy as it is impossible to avoid these radiations in day to day life and PIOUS OIL protects one person on multi dimentional level, by creating a healthy Aura around us and by keeping every element water, fire, and earth balanced with the aroma-therapeutic properties of its oils [21, 22].

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